

# Environmentally Preferable Paint



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## INTRODUCTION

Because paints are produced and consumed in huge volumes and contain potentially harmful solvents, pigments, and additives, the paint industry is giving increasing attention to mitigating the environmental impacts of paints and is introducing several environmentally preferable paints.

All oil and many latex paints contain solvents to disperse and bind other paint components. Solvents are the major ingredients that contribute to volatile organic compound (VOC) levels in paints. VOCs are any organic (hydrocarbon) compound that evaporates at normal room temperature. VOCs can cause the formation of ozone and photochemical smog, which have harmful effects on human health. Paints that are specifically marketed as "fast drying" usually contain even higher levels of these solvents.

Buying less hazardous paints can reduce your disposal costs when it comes time to properly dispose of any leftover paints

## DEFINITIONS

### Oil-based Paint

Solvent-based, sometimes called oil-based, paints can use various combinations of solvents to carry the pigments, binders, and other components. The solvents evaporate and leave the paint fixed to the surface.

### Latex Paint

Latex paint is a water-based mixture of binders and carriers. Though called "latex" paint, it does not contain latex rubber (the sap of the rubber tree that has historically been called latex). Latex paints cure as water and trace solvents evaporate.

## Recycled Paint

Marketable paints made from recovered waste represent a significant opportunity for the reduction of hazardous waste and hazardous waste disposal costs. Some manufacturers have experimented with reprocessed household and industrial waste paint, often collected through “Wastemobile” and other hazardous waste collection programs. Because the colors, textures, and other qualities of the resulting “recycled” paints reflect their mix of many feedstocks, these have sometimes failed to meet the desires and expectations of consumers and designers. Despite this challenge, some manufacturers continue to work toward retail availability of high-quality recycled paint.

There are two types of recycled-content paint: reprocessed and rebled. Both types of recycled paints are made from leftover latex paint collected through public and private collection programs.

- Reprocessed paint is recovered waste paint that is mixed with virgin materials, such as resins and colorants, and tested. These paints generally contain a minimum of 20% post-consumer content.
- Reblended (consolidated) paint is recovered paint that is screened, re-mixed, tested and packaged for distribution. Virgin raw materials such as resins and colorants may be added in small quantities. Typically, these paints contains anywhere from 80% to 100% post-consumer content.

## Low VOC Paint

Volatile Organic Compounds (VOCs) are the chemicals released into the atmosphere as paint dries. These chemicals are added to paint for many reasons (e.g. to keep paint from freezing). Even the added pigments necessary to color the product may add to the VOC level.

Allowable VOC limits are set by the federal procurement guidelines, South Coast Air Quality Management District, Master Paint Institute, Green Seal and others. Below are two VOC level table examples:

Allowable VOC levels from federal procurement guidelines:

Paint Type	Interior	Exterior
Flat	50 g/L	100 g/L
Non-Flat	150 g/L	200 g/L

Allowable VOC levels, according to the South Coast Air Quality Management District (SCAQMD)

Figure 1: Allowable VOC levels (grams/liter less water and exempt compounds)

Paint Type	VOC limit (grams/liter)
Flat	100 (limit of 50 beginning July 2008)
Non-Flat	150 (limit of 50 beginning July 2006)
Primers, Sealers, & Undercoaters	200 (limit of 100 beginning July 2006)
Quick-dry Enamels	250 (limit of 150 proposed beginning July 2006 and 50 proposed beginning July 2007)

## STANDARDS AND GUIDELINES

### Master Painters Institute Green Performance Standard

The Master Painters Institute (MPI) is a nationally recognized organization that develops standards and specifications for the performance and the application of architectural coatings. The MPI has been testing and qualifying products for their Approved Products List since 1967. In 2008, the MPI developed a Green Performance™ Standard (GPS-1-08) and (GPS-2-08) for environmentally

preferable paints and coatings that also meet minimum performance standards. The MPI maintains a listing of products that meet GPS-1-08.

### Green Seal

- Green Seal Standard for low VOC Paint GS-11 (1993/2008)
- Green Seal Standard for Recycled Content Paint GS-43 (2006)
- Green Seal Certified Paints list

### Environmental Protection Agency

Low VOC

Reference [Test Method 24](#) Code of Federal Regulations Title 40, Part 60, Appendix A

Recycled Paint

[Comprehensive Procurement Guidelines](#)

EPA's Recommended Recovered Materials Content Levels for Reprocessed and Consolidated Latex Paints

Product	Postconsumer Content (%)	Total Recovered Materials Content (%)
<b>Reprocessed Latex Paint:</b>		
- White, Off-White, Pastel Colors	20	20
- Grey, Brown, Earthtones, and Other Dark Colors	50-99	50-99
<b>Consolidated Latex Paint</b>	100	100

### US Green Building Council's Leadership in Energy and Environmental Design (LEED)

The LEED Green Building Rating System® provides minimum performance standards for various sustainable building elements, including paint. LEED gives Green Building credit for paints that meet the VOC and chemical component limits of Green Seal requirements.

Using recycled paint may qualify under a few categories of LEED, such as:

- EQ Credit 4.2: Low-Emitting Materials, Paints
- MR Credit 4.1: Recycled Content, Specify 25%
- MR Credit 5.1: Local/Regional Materials, 20% Manufactured Locally

### GREENGUARD Environmental Institute

Established performance based standards to define goods with low chemical and particle emissions for use indoors. The standard establishes certification procedures including test methods, allowable emissions levels, product sample collection and handling, testing type and frequency, and program application processes and acceptance.

## USAGE HISTORY AND EXPERIENCE

Paint products with recycled content were used with good results in trials in the 1990's by King County Parks Division, Stadium Administration and Department of Transportation. Unfortunately, the local vendor that recycled paint and reprocessed it into new paint went out of business. The county does use primarily low VOC paints.

In 2008, the State of Washington added recycled paint to contract. More information is below. King County continues to look for opportunities to try out this paint.

## BID AND CONTRACT SPECIFICATIONS

Paint products with recycled content have been purchased by County agencies through the years. In 1999, County contractors used recycled paint, as well as low VOC paint, in the new King Street Center County office building, and used recycled paint in the Vashon Transfer Station. Users choose paint that will perform, and we continue to look forward to establishment of performance standards for reprocessed/reblended paints that can be use in specification to give users the performance they require.

King County maintains contracts for paint and painting supplies and can use the State of Washington's two contracts for paint, one which includes recycled content, and the other offers "low VOC."

### State of Washington

#### [Recycled Paint Contract #00207](#)

Recycled paint project to reduce waste paint deposited into Washington State landfills on behalf of the Washington Department of Ecology

This contract provides consolidated paint meeting the Green Seal organization GS-43 standard of 95% or more recycled material.

Excerpts of [Paint Contract #15504](#) - Regular paint contract including low VOC

Paint meets or exceeds EPA standards for Volatile Organic Compounds (VOC) per Test Method for Measuring Total VOC content for consumer products, Method 24 (For Surface Coatings)

ASTM D3960 – Practice for Determining Volatile Organic Compound (VOC) Content of Paint Coatings

## FOR MORE INFORMATION

#### [Paint Calculator](#)

Buy only the paint you need. Calculate your needs based on square footage

#### [Environmentally Preferable Paint](#)

Best practices from the State of California

#### [Product Stewardship Institute, Inc. - Paint](#)

National non-profit membership-based organization that pursues initiatives to ensure that all those involved in the lifecycle of a product share responsibility for reducing its health and environmental impacts.

#### [Recycled Paint Fact Sheet](#)

State of Washington fact sheet on recycled paint

## VENDOR INFORMATION

### Recycled

#### [MetroPaint](#) (Portland) (503)234-3000

MetroPaint is a 100 percent recycled latex paint produced in Portland, Oregon, since 1992. Metro sells recycled latex paint in 5-gallon pails and 1-gallon cans.

#### [Visions Paint Recycling](#) 800-770-7664 Toll Free (California)

Certified (GS-43)

#### [Kelly Moore E-Coat](#)

### Low-VOC

Best Paint

Benjamin Moore Ecospec